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EXAMINER	
FOWLKES, ANDRE R	
ART UNIT	**PAPER NUMBER**
2192	

DATE MAILED: 10/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/965,429	OBIED ET AL.	
	Examiner	Art Unit	
	Andre R. Fowlkes	2192	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 June 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,4-13,15-24 and 26-39* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1, 2, 4-13, 15-24 & 26-39* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6/27/05 has been entered.

Drawings

2. The objection to the drawings is withdrawn, in view of applicant's amendment.

Claim Rejections - 35 USC § 112

3. Claims 1, 2, 4-13, 15-24 and 26-36 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claims 1, 13, 24, 35 and 36 contain the limitation "generating software code ... in real-time", (e.g. claim 1, lines 8-10). There is no support given, from the original disclosure, for this limitation.

In the response, filed on 6/27/05, the applicant appears to only cite support for the limitation generating real-time embedded software. The applicant cites ¶ 24:1-3, "In accordance with the present invention, the real-time embedded game application

software in the memory 42 is developed using a unique software development process. Specifically, much of the software code is automatically generated". The examiner could not find any text in the specification that supports the limitation generating real-time embedded software in real time.

Applicant may attempt to demonstrate that the original disclosure establishes that he or she was in possession of the amended subject matter or provide the page and line numbers, from the specification, in support of each change in the amended claims.

Claims 4-12, 15-23 and 26-34 are also rejected as being dependent on a rejected base claim.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1, 2, 4-13, 15-24 and 26-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Quatrani, "Visual Modeling with Rational Rose 2000 and UML", ISBN: 0-201-69961-3 in view of the online brochure "Accelerating Embedded e-development", located at <www.ghs.com/partners/rational/rose-rt.pdf>.

As per claim 1, Quatrani discloses: a **method for generating software code** for an application **having a randomly selected outcome** (p. 16 line 7-8, "the Rational Rose product family is designed to provide the software developer with a complete set of visual modeling tools for development of ... (any kind of software applications")**, comprising:**

- preparing an analysis model for the application**, the analysis model describing functionality to be included in the software code** (p. 13 line 15 – p. 14 line 5, "Structuring the project (using the software development tool) ... includes the following activities:

- Requirements-a narration of the system vision along with a set of functional and non functional requirements (i.e. an analysis model)"),

- preparing a design model for the application**, the design model including a plurality of objects for realizing the functionality in the analysis model** (p. 13 line 15 – p. 14 line 5, "Structuring the project (using the software development tool) ... includes the following activities:

- Business Modeling-the identification of desired system capabilities and user needs (and objects)

- Analysis and Design (Models)- a description of how the system will be realized in the implementation phase (including a plurality of objects)", and software engineering principles specify that the design is based on the analysis of the solution),

- wherein the design model defines static relationships between the objects and dynamic behavior of the objects, wherein the functionality realized is

determined by the design model based on the analysis model (p. 36 line 2-5, "uses cases and scenarios (i.e. object model diagrams) provide a way to describe (static) system behavior; that is, the interaction between objects in the system ...A state chart diagram shows the ... events or messages that cause a transition from one state to another, and the actions that result from a state change (i.e. dynamic relationships between objects)"),

- generating software code for the application **from the design model, the software code including at least a portion that is automatically generated in real-time using a software development tool** (p. 13 line 15 – p. 14 line 5, "Structuring the project (using the software development tool) ... includes the following activities:

-Implementation- the production of the code, (automatically from the design model) ,that will result in an executable system", and the compiler responds to the request to produce code nearly simultaneously with the corresponding input (i.e. in real time)).

- wherein the automatically generated portion of the software code including the static relationships between the objects and the dynamic behavior of the objects (p. 13 line 15 – p. 14 line 5, "Structuring the project ... includes:

- Analysis and Design (Models)- a description of how the system will be realized in the implementation phase (i.e. static and dynamic relationship models)

-Implementation-the production of the code (from the static and dynamic relationship models) that will result in an executable system").

Quatrani doesn't explicitly disclose a method for generating **real-time embedded** software code for an application.

However, Accelerating Embedded e-development, in an analogous environment, discloses a method for generating **real-time embedded** software code for an application (p. 1 col. L, lines 14-17 ,"Rational Rose ® RealTime is a complete Unified Modeling Language development environment expressly created to meet these real-time (software development) challenges").

Therefore, it would have been obvious to a person of ordinary skill in the art, at the time the invention was made, to incorporate the teachings of Accelerating Embedded e-development into the system of Quatrani to have a method for generating **real-time embedded** software code for an application. The modification would have been obvious because one of ordinary skill in the art would have wanted a way of quickly developing high quality real time embedded software applications, (Accelerating Embedded e-development, p. 1 col. L, lines 1-17).

As per claim 2, the rejection of claim 1 is incorporated and further, Quatrani discloses that **the analysis model, the design model, and the software code are prepared using the software development tool** (p. 13 line 15 – p. 14 line 5, "Structuring the project (using the software development tool) ... includes the following activities:

- Business Modeling-the identification of desired system capabilities and user needs

- Requirements-a narration of the system vision along with a set of functional and non functional requirements

- Analysis and Design (Models)- a description of how the system will be realized in the implementation phase

-Implementation-the production of the code that will result in an executable system").

As per claim 4, the rejection of claim 3 is incorporated and further, Quatrani discloses that **the design model includes object model diagrams and state charts, the object model diagrams defining the static relationships between the objects** (p. 36 line 2-3, "uses cases and scenarios (i.e. object model diagrams) provide a way to describe (static) system behavior; that is, the interaction between objects in the system"), **the state charts defining the dynamic behavior of the objects** (p. 36 line 4-5, "A state chart diagram shows the ... events or messages that cause a transition from one state to another, and the actions that result from a state change").

As per claim 5, the rejection of claim 1 is incorporated and further, Quatrani discloses that **the functionality described by the analysis model is organized into use cases, the use cases being selected from the group consisting of: handling money, playing the wagering game, handling critical events, and servicing the machine** (p. 20 line 2-3, "The behavior of the system under development (i.e., what functionality must be provided by the system (the analysis model)) is documented in a

use case model that illustrates the system's intended functions (use cases)", and Rational Rose is a system involving use cases that are created and selected for use depending on each type of application. For example, to create a banking program, using Rational Rose, one would have use cases for handling money and handling critical events).

As per claim 6, the rejection of claim 5 is incorporated and further, Quatrani discloses that **the analysis model includes use case diagrams and sequence diagrams** (p. 24 line 2-5, "sequence diagram ... use case)**, the use case diagrams defining relationships between the use cases and external actors outside the** software application**, the sequence diagrams defining a sequence of interactions between the use cases and the external actors** (p. 24 line 2-5, "A sequence diagram shows object interactions, (e.g. interactions between use case and the external actors), arranged in time sequence. It depicts the objects and classes involved in the scenario and the sequence of messages exchanged between the objects needed to carry out the functionality of the scenario. Sequence diagram typically are associated with the use case realizations, (which define relationships between the use cases and external actors), in the logical view of the system under development.").

As per claim 7, the rejection of claim 1 is incorporated and further, Quatrani discloses that **the analysis model and the design model conform to the Unified Modeling Language (UML) standard** (p. 10 line 10-11, "The Unified Modeling

Language (UML) provides a very robust notation which grows from analysis into design (modeling)").

As per claim 8, the rejection of claim 1 is incorporated and further, the additional limitation of this claim, (that the application created using this system is a **slot reel game including a plurality of symbol-bearing reels that are rotated and stopped to place symbols on the reels in visual association with a display area**), is directed toward non-functional descriptive material, in that the specific type of software created with this software development system is merely non-functional descriptive material. Non functional descriptive material cannot render non-obvious an invention that would have otherwise been obvious (In re Gullack, 703 F.2d 1381, 1385, 217 USPQ 401, 404 (Fed.Circ. 1983)).

As per claim 9, the rejection of claim 1 is incorporated and further, Quatrani discloses that **the software code includes another portion that is manually prepared** (p. 18 line 22, "use round-trip engineering facilities to (automatically) keep your designs synchronized with your (manual and automatically generated) code").

As per claim 10, the rejection of claim 9 is incorporated and further, Quatrani discloses that **the objects are associated with operations** (p. 22 line 10, "(object) behavior is implemented by the set operations for the object"), **the manually prepared portion of the software code defining the operations** (p. 18 line 22, "use round-trip

engineering facilities to (automatically) keep your designs synchronized with your (manual and automatically generated) code", and the user chooses which code to prepare manually).

As per claim 11, the rejection of claim 1 is incorporated and further, Quatrani discloses the step of **modifying the design model and automatically modifying the software code in response to modifying the design model** (p. 18 line 22, "use round-trip engineering facilities to (automatically) keep your designs synchronized with your code").

As per claim 12, the rejection of claim 1 is incorporated and further, Quatrani discloses **modifying the software code and automatically modifying the design model in response to modifying the software code** (p. 18 line 22, "use round-trip engineering facilities to (automatically) keep your designs synchronized with your code").

As per claims 13 &15-23, this is an apparatus version of the claimed method discussed above, in claims 1, 2 & 4-12, wherein all claimed limitations have also been addressed and/or cited as set forth above. For example, see Quatrani's Visual Modeling with Rational Rose 2000 and UML (p. 10 line 10 – 36 line 5) and Accelerating Embedded e-development: Rational Rose Real-time figure on p. 2, and associated text.

As per claims 24 & 26-34, this is a product version of the claimed method discussed above, in claims 1, 2 & 4-12, wherein all claimed limitations have also been addressed and/or cited as set forth above. For example, see Quatrani's Visual Modeling with Rational Rose 2000 and UML (p. 10 line 10 – 36 line 5) and Accelerating Embedded e-development: Rational Rose Real-time figure on p. 2, and associated text.

As per claims 35, this is another method version of the claimed method discussed above, in claims 1, 5 & 11, wherein all claimed limitations have also been addressed and/or cited as set forth above. For example, see Quatrani's Visual Modeling with Rational Rose 2000 and UML (p. 10 line 10 – 36 line 5) and Accelerating Embedded e-development: Rational Rose Real-time figure on p. 2, and associated text.

As per claims 36, this is another method version of the claimed method discussed above, in claims 1, 5, 12 & 37, wherein all claimed limitations have also been addressed and/or cited. For example, see Quatrani's Visual Modeling with Rational Rose 2000 and UML (p. 10 line 10 – 36 line 5) and Accelerating Embedded e-development: Rational Rose Real-time figure on p. 2, and associated text.

As per claim 37, the rejection of claim 6 is incorporated and further, Quatrani discloses that **the external actors are selected from the group consisting of: a player, a money handling function, a host and a random number generator**, (p. 20 line 2-3, "The behavior of the system under development (i.e., what functionality must

be provided by the system (the analysis model)) is documented in a use case model that illustrates the system's intended functions (use cases)", and Rational Rose is a system involving use cases and actors that are created and selected for use depending on each type of application. For example, to create a banking program, using Rational Rose, one would have actors for a player (i.e. a client), and a money handling function).

As per claims 38-39, this is another method version of the claimed method discussed above, in claims 1, 5, 12 & 37, wherein all claimed limitations have also been addressed and/or cited. For example, see Quatrani's Visual Modeling with Rational Rose 2000 and UML (p. 10 line 10 – 36 line 5) and Accelerating Embedded e-development: Rational Rose Real-time figure on p. 2, and associated text.

Response to Arguments

6. Applicants arguments have been considered but they are not persuasive.

In the remarks, the applicant has argued substantially that:

1) There is support for the 10/21/04 claim amendments containing the limitation, "generating software code ... in real time", at p. 10:14-22.

Examiner's response:

1) In the response, filed on 6/27/05, the applicant appears to only cite support for the limitation generating real-time embedded software. The applicant cites ¶ 24:1-3, "In

accordance with the present invention, the real-time embedded game application software in the memory 42 is developed using a unique software development process. Specifically, much of the software code is automatically generated". The examiner could not find any text in the specification that supports the limitation generating real-time embedded software in real-time.

Applicant's reply at p. 10:14-22 provides support for the limitation "generating real-time ... code". Applicant's reply does not cite sections of the specification that support the limitation "generating software code ... in real-time". The limitation "generating real-time ... code" is different from the limitation "generating software code ... in real-time". Real-time code is software that must respond to input instantly; the limitation, generating code in real time, is very different from the characteristics of how executing software responds to inputs. Applicant's assistance would be appreciated in providing your definition of generating code in real time and in demonstrating that the original disclosure establishes that he or she was in possession of the amended subject matter or provide the page and line numbers, from the specification, in support of each change in the amended claims.

2) The cited art does not disclose the newly added features of presently amended and new claims 1, 5, 35-39, at p. 13:1-17:11.

Examiner's response:

2) In response to applicant's argument that the references fail to show the new limitations of the presently amended and new claims, it is noted that the newly added limitations upon which applicant relies are fully addressed in the above art rejection.

In the remarks, the applicant has argued substantially that:

3) Quatrani does not disclose preparing a design model that defines static relationships between objects and dynamic behavior of the objects, at p. 10:6-19.

Examiner's response:

3) The examiner disagrees with applicant's characterization of the applied art. Quatrani discloses that "uses cases and scenarios (i.e. object model diagrams) provide a way to describe (static) system behavior; that is, the interaction between objects in the system ...A state chart diagram shows the ... events or messages that cause a transition from one state to another, and the actions that result from a state change (i.e. dynamic relationships between objects)", at p. 36 line 2-5. The claims must be given their broadest reasonable interpretation consistent with the specification in order to reduce the possibility that the claim, once issued, will be interpreted more broadly than is justified. *In re Hyatt*, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1667 (Fed. Cir. 2000) and *In re Prater*, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-51 (CCPA 1969). Applicant is advised to further distinguish the claims from the applied art or further describe how applicant's invention is distinct from the cited art in the response.

In the remarks, the applicant has argued substantially that:

4) Neither Quatrani nor Accelerating, alone or in combination disclose that the wagering game is a slot reel game including a plurality of symbol-bearing reels that are rotated and stopped to place symbols on the reels in visual association with a display area, at p. 10:20-23, p. 11:13-14 & p. 12:13-14.

Examiner's response:

4) The Quatrani/Accelerating combination discloses preparing an analysis model, preparing a design model and generating software for a software application (i.e. a wagering game). The limitations, "a wagering game" and the specific features of the game, are directed toward non-functional descriptive material, in that the specific type of software created with this software development system is merely non-functional descriptive material. Non functional descriptive material cannot render non-obvious an invention that would have otherwise been obvious (In re Gullack, 703 F.2d 1381, 1385, 217 USPQ 401, 404 (Fed.Circ. 1983)).

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andre R. Fowlkes whose telephone number is (571) 272-3697. The examiner can normally be reached on Monday - Friday, 8:00am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tuan Q. Dam can be reached on (571)272-3695. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ARF

TUAN DAM
SUPERVISORY PATENT EXAMINER